LISTING OF THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A process for the production of a shell mould, comprising the sequential steps of:

(i) dipping a preformed expendable pattern into a slurry of refractory particles and colloidal liquid binder whereby to form a coating layer on said pattern,

(ii) depositing particles of refractory material onto said coating, and

(iii) drying,

steps (i) to (iii) being repeated as often as required to produce a shell mould having the required number of coating layers,

characterised in that during at least one performance of step (ii), the particles of refractory material have been pre-mixed with a gel-forming material whereby to coat at least a portion of said refractory particles with said gel forming material, such that after contact with the coating layer, moisture is absorbed by the gel-forming material, thereby causing gellation of the colloidal binder so reducing the time required for drying in step (iii).

2. (Original) The method of claim 1, including the additional step (iv), carried out after the final step (iii) of applying a seal coat comprising a slurry of refractory particles and colloidal liquid binder, followed by drying.

3. (Previously Presented) The method of claim 1, wherein the gel-forming material-coated refractory particles are applied during each repetition of step (ii) after the first.

4. (Previously Presented) The method of claim 1, wherein step (ii) is achieved using a rainfall sander.

5. (Previously Presented) The method of claim 1, wherein the amount of gel-

forming material used in any performance of step (ii) is no more than 2wt% of the refractory material particles used in that step (ii)

6. (Previously Presented) The method of claim 1, wherein said gel-forming material is a super absorbent polymer.

7. (Original) The method of claim 6, wherein said polymer is a polyacrylate.

8. (Currently Amended) The method of claim 1, additionally comprising a step of coating at least some of the refractory particles with the gel-forming material.

9. (Original) The method of claim 8, wherein the proportion of precoated to uncoated particles used in step (ii) is 75:25 by weight.

10. (Original) The method of claim 9, wherein said ratio is achieved by coating refractory particles with the gel-forming material and mixing said coated particles with uncoated particles.

11. (Original) The method of claim 8, wherein said coating step is effected by mixing the gel-forming material with water to form a gel and subsequently mixing the refractory particles into the gel followed by drying and grinding the resultant mass.

12. (Original) The method of claim 11, wherein said coating step is effected by spray drying of the refractory particles, agglomeration or using a fluidised bed.

13. (Previously Presented) The method of claim 1, wherein said refractory particles are silica, zirconium silicate, alumino-silicate, alumina or yttria particles.

14. (Previously Presented) The method of claim 1, including a step of removing the expendable pattern from the shell mould after the last step (iii), or step (iv) when present, and a final step of firing the resultant shell mould.

15. (Currently Amended) A shell mould producible by a process for the production of said shell mould, said process comprising:

(i) dipping a preformed expendable pattern into a slurry of refractory particles and colloidal liquid binder whereby to form a coating layer on said pattern,

(ii) depositing particles of refractory material onto said coating, and

(iii) drying,

wherein said steps (i) to (iii) ~~being~~ are repeated as often as required to produce a shell mould having the required number of coating layers,

characterised in that during at least one performance of step (ii), the particles of refractory material have been pre-mixed with a gel-forming material whereby to coat at least a portion of said refractory particles with said gel forming material,

such that after contact with the coating layer moisture is absorbed by the gel-forming material thereby causing gellation of the colloidal binder so reducing the time required for drying in step (iii).